

Title (en)

IMAGE CAPTURE DEVICE, IMAGE PROCESSING DEVICE AND IMAGE PROCESSING PROGRAMME

Title (de)

BILDERFASSUNGSVORRICHTUNG, BILDVERARBEITUNGSVORRICHTUNG UND BILDVERARBEITUNGSPROGRAMM

Title (fr)

DISPOSITIF DE CAPTURE D'IMAGE, DISPOSITIF DE TRAITEMENT D'IMAGE ET PROGRAMME DE TRAITEMENT D'IMAGE

Publication

**EP 2549739 A4 20140312 (EN)**

Application

**EP 11755804 A 20110127**

Priority

- JP 2010064996 A 20100319
- JP 2011000443 W 20110127

Abstract (en)

[origin: US2012057036A1] An image capture device of the present invention includes: a plurality of image sensors (310a, 310b); an optical element (light entrance section) 315 which is configured to allow incoming light to sequentially impinge on the respective image sensors (310a, 310b) according to a time-coded pattern during the exposure time; a camera shake detection section 345 for detecting camera shake which occurs during the exposure time to generate camera shake information that represents a trajectory of the camera shake; and an image processing section 220 for processing the plurality of images obtained by the plurality of image sensors (310a, 310b). The image processing section 220 includes a PSF determination section for determining, based on the camera shake information and the time-coded pattern, point spread functions that define blurs which are caused by the camera shake in the respective images, an image restoration section for restoring respective images using the point spread functions, and an image synthesizing section for synthesizing the plurality of restored images.

IPC 8 full level

**H04N 23/40** (2023.01)

CPC (source: EP US)

**H04N 23/682** (2023.01 - EP US); **H04N 23/683** (2023.01 - EP US)

Citation (search report)

- [A] US 2007065130 A1 20070322 - FUKUMOTO SHINPEI [JP], et al
- [A] US 2005047672 A1 20050303 - BEN-EZRA MOSHE [IL], et al
- [AD] RAMESH RASKAR ET AL: "Coded exposure photography: motion deblurring using fluttered shutter", ACM TRANSACTIONS ON GRAPHICS (TOG), ACM, US, vol. 25, no. 3, 1 July 2006 (2006-07-01), pages 795 - 804, XP002467982, ISSN: 0730-0301, DOI: 10.1145/1141911.1141957
- [AD] ROB FERGUS ET AL: "Removing camera shake from a single photograph", ACM SIGGRAPH 2006 COURSES ON , SIGGRAPH '06, 1 July 2006 (2006-07-01), New York, New York, USA, pages 787 - 794, XP055098785, ISBN: 978-1-59-593364-5, DOI: 10.1145/1179352.1141956
- See also references of WO 2011114611A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

**US 2012057036 A1 20120308; US 8675079 B2 20140318**; CN 102428694 A 20120425; CN 102428694 B 20150826; EP 2549739 A1 20130123; EP 2549739 A4 20140312; EP 2549739 B1 20161012; JP 2011199660 A 20111006; JP 5249271 B2 20130731; WO 2011114611 A1 20110922

DOCDB simple family (application)

**US 201113320100 A 20110127**; CN 201180002102 A 20110127; EP 11755804 A 20110127; JP 2010064996 A 20100319; JP 2011000443 W 20110127